

## INFORMATION TECHNOLOGY IN THE EDUCATION SYSTEM: SCIENTIFIC PEDAGOGICAL CONCERNS

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**Annotation:** *The use of information technology, the practice of integrating computer telecommunication into the educational system, and scientific pedagogical issues are all covered in this article. It was explored how to engage students creatively in the learning process rather than just having them observe and absorb information from a screen.*

**Key words:** *Teaching methods, pedagogical and informational technology, the educational system, individual growth, information literacy, computer literacy, the validity of education, and multimedia tools.*

## ИНФОРМАЦИОННЫЕ ТЕХНОЛОГИИ В СИСТЕМЕ ОБРАЗОВАНИЯ: НАУЧНО-ПЕДАГОГИЧЕСКИЕ ПРОБЛЕМЫ

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**Аннотация:** *В статье освещаются вопросы использования информационных технологий, практика внедрения компьютерных телекоммуникаций в систему образования, научно-педагогические вопросы. Было изучено, как творчески вовлекать учащихся в процесс обучения, а не просто заставлять их наблюдать и впитывать информацию с экрана.*

**Ключевые слова:** *Методы обучения, педагогические и информационные технологии, образовательная система, индивидуальный рост, компьютерная*

*грамотность, валидность обучения, информационная грамотность, мультимедийные средства.*

The future of our country, its development, and its place in the world community depend on the fate of the mature young generation. From the first years of independence, attention was paid to the issue of reforming the education system at the level of state policy, and the main goal was to educate the young generation in conditions suitable for world standards, to develop into a mature person, and to reveal their abilities and talents.

At the same time, the adoption of the decision of the President of the Republic of Uzbekistan dated May 20, 2011 No. 1533 "On measures to strengthen the material and technical base of higher educational institutions and radically improve the quality of training of highly qualified specialists" is being accelerated in educational process. [1]

Improving the quality of education through the use of modern pedagogic and information communication technologies in higher education institutions has become the demand of the day to fulfill the tasks set in the decision. In order to increase the effectiveness of training sessions in educational institutions, they are being conducted using innovative and multimedia technologies. It is guaranteed that the level of education of students will increase, and from this point of view, great attention is being paid to it from school to higher education institutions.

If we take a look at the development of the educational process, we can be sure how important pedagogical issues are being solved today with the help of computer telecommunications. From the experience of using computer telecommunications in various fields of education, it can be seen that information technology is creating a number of positive opportunities for us, including:

- ✓ organization of various types of collaborative scientific research of professors, teachers, scientific staff and students (really creative research, independent practical activity, independent knowledge acquisition, practical creative

- activity and other types of cooperation with the help of various scientific and practical projects);
- ✓ organizing and delivering quick expert advice to the general public studying at the scientific-methodological center;
  - ✓ establishment of a network of distance education and professional development of pedagogical personnel;
  - ✓ quick information exchange;
  - ✓ to teach partners in education, regardless of whether it is a student, student, teacher, researcher, to develop the skills of mutual exchange of ideas, the culture of communication and express their opinions quickly, concisely and clearly;
  - ✓ development of cultural and social skills and abilities of young people as a result of exchange of ideas with comprehensive positive information of cultural, ethnic, humanitarian, etc.

When using information technologies in the educational process, we should teach students not only to see and accept information on the screen, but also to participate creatively in this process. Connecting the world of hidden possibilities associated with the didactic features of education directly with computer telecommunications has modern and promising goals in this field of education. As a didactic function, we understand the manifestation of the external properties of educational tools used for certain purposes in the educational process. It consists of their functions, role and importance in the educational process. [2]

In recent years, the idea of integration (creating a creative environment of scientific-pedagogical cooperation with each other) is becoming the basis of rapidly developing theoretical and practical research. Integration, on the one hand, teaches the learner to "know the world" and to know the scientific foundations of science, and on the other hand, it teaches him to use his free time productively by dividing the educational time. Therefore, many issues in the educational process and their solutions should be focused on developing the student's thinking activity. In order to make these aspects more effective, it is necessary to skillfully use subjective factors,

for example, the variability, interest, demand, intellectual development of the learner. There are several educational technology methods that we educators find very useful in achieving this.

One of these is the project method. Applying the project method to collaborative activities is very effective. It can be effectively used in scientific circles, scientific-methodical seminars, organizing independent education, and creating a collaborative creative environment. The importance of computer telecommunications and information technologies is incomparable in making them more meaningful and comprehensive, in creating a foundation for the future scientific activity of the learner.

In this process, let's focus on the pedagogical goals of effective use of computer telecommunications and information technologies. The use of modern information technologies in education is one of the important and priority directions of the development of the world educational process. Up to now, computer technology and information technology tools are being effectively used in almost all stages of the educational process and in the fields of science in our Republic.

Up to now, computer technology and information technology tools are being effectively used in almost all stages of the educational process and in the fields of science in our Republic. Informatization is deeply embedded in the educational process. New educational technologies based on information and communication technologies make it possible to accelerate the educational process, increase the speed of learning, receive information from a wide knowledge base, study and master this knowledge in depth.

As we know, information technology in education is the process of preparing information and transferring it to the learner using computer technology and software tools. In the process of using information technologies in education, there are two components involved in the transfer of educational information: technical tools (computer equipment and communication tools) and software tools created for different purposes. In order to prepare for the lesson and use the computer efficiently during the lesson, the teacher should know very well the functional capabilities and

conditions of use of these components, because both technical and software tools have their own characteristics and impact on the educational process.

To understand this, we need to answer the question of why computer technology is used in the course of the lesson and what methodological issues are solved using information technology tools. The pedagogical goals of using information technologies are as follows:

- ✓ personality development (thinking; aesthetic education; development of experimental research activities;
- ✓ formation of information culture;
- ✓ of the user in training specialists of a specific field consists of general information preparation ("computer literacy") fulfilling a social order;
- ✓ to increase the productivity of the educational process, the quality and efficiency of education, to ensure the important aspects of knowledge and learning activities, to deepen interdisciplinary due to the integration of information and science.

The methodological possibilities of information technology tools are as follows:

- visualization of knowledge;
- differentiation and individualization of education;
- opportunities to monitor the processes of object development, construction of drawings and images, operations (computer demonstrations);
- object, process and event modeling;
- organization and use of databases; access to a large amount of information, presented in an interesting form using multimedia tools;
- forming the skills of searching, processing and sending information when working with computer catalogs and directories;
- self-control;
- learn to practice and prepare independently;
- increasing the reliability of education (various games, multimedia tools);
- skills to find the optimal solution in complex situations
- forming;

- development of certain forms of thinking (for example, demonstrative, exemplary);
  - formation of the culture of educational activity; formation of information culture;
  - teaching to distinguish between study time and independent activity time, etc.
- [3]

Now let's focus on the second component mentioned above, that is, the types of pedagogical software tools. During the application of information technologies in education, special software tools are used along with technical tools. A software tool focused on the educational process is a software tool reflected in the study of a field of science, which provides the technology for studying this field of science and the conditions for the implementation of various educational activities related to it. Software tools that provide such functionality for various types of educational processes are called pedagogical software tools.

Currently, there are various types and groups of pedagogical software tools. Pedagogical software tools, depending on their methodological function, include:

- ❖ computer textbooks (lessons);
- ❖ tutoring programs;
- ❖ control programs (test shells);
- ❖ information-guide (encyclopedia) programs;
- ❖ simulation programs; modeling programs;
- ❖ presentation programs (slides, video films);
- ❖ educational programs; programs aimed at meaningful spending of free time (computer games: fun games, strategic games, controlled games, logic games, sports games, etc.). [4]

Thus, the knowledge obtained with the help of computer telecommunications and information technologies remains in the memory for a long time and can be restored with repetition in a short time to apply them in practice later.

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